

Title (en)
Rolling mill and rolling method

Title (de)
Walzwerk und Walzverfahren

Title (fr)
Laminoir et procédé de laminage

Publication
EP 1281448 A2 20030205 (EN)

Application
EP 02015570 A 20020712

Priority
• JP 2001228993 A 20010730
• JP 2001312176 A 20011010

Abstract (en)
A screw down cylinder, an upper backup roll chock, and an upper work roll chock are pressed against an upper crosshead by hydraulic cylinders, and an upper roll cross mechanism is actuated, whereby the upper backup roll chock (upper backup roll), the upper work roll chock (upper work roll), and the screw down device (screw down cylinders) can be synchronously moved in the same direction via the upper crosshead. <IMAGE>

IPC 1-7
B21B 13/02; **B21B 31/16**; **B21B 31/32**

IPC 8 full level
B21B 1/22 (2006.01); **B21B 13/02** (2006.01); **B21B 13/14** (2006.01); **B21B 31/16** (2006.01); **B21B 31/18** (2006.01); **B21B 31/32** (2006.01); **B21B 31/02** (2006.01); **B21B 31/20** (2006.01)

CPC (source: EP KR US)
B21B 1/22 (2013.01 - KR); **B21B 13/023** (2013.01 - EP US); **B21B 31/16** (2013.01 - EP US); **B21B 31/32** (2013.01 - EP US); **B21B 31/02** (2013.01 - EP US); **B21B 31/18** (2013.01 - EP US); **B21B 31/203** (2013.01 - EP US); **B21B 2013/025** (2013.01 - EP US); **B21B 2031/206** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)
EP 1281448 A2 20030205; **EP 1281448 A3 20050817**; BR 0202860 A 20030603; CA 2392099 A1 20030130; CN 1257026 C 20060524; CN 1400065 A 20030305; JP 2003112211 A 20030415; JP 3692319 B2 20050907; KR 100479892 B1 20050330; KR 20030011651 A 20030211; TW I244948 B 20051211; US 2003019271 A1 20030130; US 6895794 B2 20050524

DOCDB simple family (application)
EP 02015570 A 20020712; BR 0202860 A 20020723; CA 2392099 A 20020628; CN 02126979 A 20020726; JP 2001312176 A 20011010; KR 20020044566 A 20020729; TW 91114171 A 20020627; US 19270002 A 20020711